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Report to the Chairman, Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations, House of Representatives

April 1988

SURFACE MINING

Cost and Availability of Reclamation Bonds

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Program Evaluation and
Methodology Division

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The Honorable Mike Synar
Chairman, Subcommittee on Environment,
Energy, and Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

In response to your May 12, 1986, letter, we are submitting this report on the availability of surety reclamation bonds for surface coal mine operators. In this study we report on current bond availability in the context of a ten year trend, examine the difficulties experienced by operators affected by surety insolvencies, and discuss the position of surety companies on underwriting reclamation bonds. We also recommend action by the Office of Surface Mining, Reclamation and Enforcement to improve bond availability, particularly for small operators.

As we agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from the date of the report. At that time, we will send copies to interested congressional committees, the Secretary of the Interior, the Director of the Office of Surface Mining, Reclamation and Enforcement, and other interested parties, and will make copies available to other persons upon request.

Sincerely,

Eleanor Chelinsky
Director

Executive Summary

Purpose

The Congress has received numerous reports that the bonds required of surface coal mine operators to cover the possible costs of redressing environmental damage have become unavailable or excessively costly. Without such bonds or similar financial mechanisms called for by the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87), coal mining would necessarily be curtailed. The Subcommittee on Environment, Energy, and Natural Resources of the House Committee on Government Operations asked GAO to examine the availability of reclamation bonds written by surety companies and the reasonableness of the rate setting procedures used for these bonds. The committee posed the following specific questions:

- How has the use of the different financial assurance mechanisms allowable under the law changed over the past decade?
- How has the number of surety companies underwriting mining reclamation bonds changed during the same period?
- Have coal operators affected by surety insolvencies been able to replace their reclamation bonds?
- How does the surety industry determine risk and set rates for mining reclamation bonds?

Background

Coal contributes about 24 percent of all the nation's energy. However, coal mining can result in soil erosion and water pollution. Thus, the law requires as a condition of receiving a mining permit that a surface mine operator provide a financial guarantee to the regulatory authority that the land will be restored to its original condition once mining has been completed. An operator can fulfill this bonding requirement by pledging collateral, by obtaining a surety bond or by following self-bonding procedures. GAO examined bonding procedures in Kentucky, Ohio, Pennsylvania, and West Virginia, which together issued approximately 80 percent of the nation's mine permits between 1977 and 1986.

Results in Brief

GAO found that surety bonds have become more difficult to obtain since 1984, particularly for small operators. The rates charged for surety bonds have not changed during this period, generally remaining between 5 and 6 percent of the total bond value over a 5-year term, but the number of companies writing bonds has decreased by one-quarter since 1984 and their terms have become more stringent. Some companies require as collateral as much as 100 percent of the bond's face value. Thus, some operators have turned to the other financial mechanisms allowable under the law, but these impose a heavier drain on assets than

uncollateralized bonds. GAO's review of published earnings indicated that reclamation bonds have been one of the more profitable property/casualty insurance lines since 1980. Although the bonds account for only one-tenth of 1 percent of the premiums earned by the property/casualty insurance industry, these premiums have consistently exceeded losses and expenses. This has not been true for the industry overall. Members of the surety industry, however, feel that uncertainties created by economic conditions in the coal market and the extended liability period under the law now make underwriting reclamation bonds an unattractive prospect.

Principal Findings

Changes in Use of Financial Assurance Mechanisms

Through its analysis of state records, GAO found that surety bonds were the overwhelming mechanism of choice among operators seeking new mining permits during the past ten years. Ninety percent of the value of reclamation bonds posted in the four states over the past 10 years was covered by surety bonds. However, in Kentucky, Ohio and West Virginia, the use of non-surety bonds has increased from 6 percent in 1984 to 15 percent in 1986. These findings substantiated the reports of a tightening bond market obtained from a GAO survey and interviews. Data were not available from Pennsylvania to compare the relative use of surety and non-surety bonds, but, in contrast to the other three states, the face value of surety bonds posted in 1985 and 1986 exceeded on average the value of bonds posted in 1977-1984. GAO found no instances of self-bonding in the four states it studied. (See pages 18-28.)

Changes in Number of Surety Companies

The number of surety companies writing reclamation bonds had gradually increased to 46 in 1982, but by 1986 had declined to 26. No new companies entered the market in Kentucky, Ohio and West Virginia between 1984 and 1986. In Pennsylvania, state officials described an active effort to encourage new sureties to write reclamation bonds after the first surety insolvency in 1985. In 1985 and 1986, six companies entered the market. (See pages 18-23.)

Operators' Ability to Replace Reclamation Bonds

Since July 1985, seven sureties that wrote reclamation bonds within these four states have become insolvent. Nearly 400 operators and more than $50 million in bonds—more than one-quarter of these states' average annual bond volume—were affected. In its survey of operators

bonded by these companies, GAO found that 70 percent of the outstanding bonds were replaced, either by other surety bonds or by some collateral mechanism. Another 10 percent of the operators' obligations were judged fulfilled by the states and their bonds were released. Twenty percent of the original bond amount was still unaccounted for and one-third of all operators had failed to replace any of their bonds. GAO believes, however, that the actual amount outstanding is greater since the operators who did not respond to its survey are more likely than those who did to have gone out of business without replacing their bonds. (See pages 29-34; 50-51.)

There were large variations among the four states, both in the proportion of bond amount replaced and in the replacement mechanisms used. Fewer than half the bonds affected in Kentucky were replaced by any mechanism and more than 20 percent of Ohio's bonds were still outstanding. In Pennsylvania and West Virginia, more than 90 percent of the bonds affected were replaced or released. Eighty percent of Pennsylvania's and 52 percent of Ohio's affected bond amounts were replaced with other surety bonds. No West Virginia operator and only one Kentucky respondent reported obtaining replacement surety bonds. (See pages 33-35.)

Substantial differences also existed between large and small operators in their ability to obtain replacement bonds and the costs of the bonds. About half of the respondent operators each produced less than 100,000 tons of coal annually. These smaller operators obtained replacement surety bonds for only 10 percent of the value of their affected bonds. For larger companies, 75 percent of the value of bonds posted was replaced with new surety bonds. Smaller operators pledged on average 25 percent collateral; larger operators pledged less than 10 percent. GAO concluded that the burden of the tightening surety market has fallen disproportionately on those with smaller cash reserves to cover the cost of using collateral bonding mechanisms. (See pages 37-38.)

Risk Determination and Rate Setting

Reclamation bonds are a highly specialized fraction of the surety industry, representing 1 percent of premiums earned. Surety earnings, in turn, are only 1 percent of all property/casualty earnings. The surety business has been relatively profitable during the 1980's, as has reclamation bonding, despite the recent rash of insolvencies. From 1980 through 1986, the property/casualty industry incurred direct losses (exclusive of premiums) which totalled 71.3 percent of earned premiums, while the surety line incurred direct losses of 45.9 percent. However, surety losses rose steadily after 1983, while reclamation bond

losses declined to a level only slightly more than half their 1980 level. Unlike the insurance industry, the surety industry does not adjust its rates to reflect an increased probability of loss. Rather, it refuses to accept business when loss can be anticipated. Many surety company officials view the reclamation requirements of the law as presenting unacceptable levels of risk and prefer to forgo this line. GAO found one surety company that offers, for more than the conventional fee, an innovative combination of reclamation bonding and frequent inspection to protect its own and its clients' interests. GAO believes that a market may exist for other companies offering similar services. (See pages 40-49.)

Recommendation

As long as the world market for coal remains depressed, the supply of reclamation bonds will remain limited. If no action is taken to loosen the tight bond market, more operators are likely to abandon surface mining. Among these will be a number of marginal operators who would have defaulted on their reclamation guarantees, but some otherwise reliable operators could also leave the industry. Without action, both economic and environmental damage will be sustained by the states in which mining is a significant source of income.

GAO recommends that the Secretary of the Interior direct the Office of Surface Mining, Reclamation and Enforcement to explore ways to develop a bond market in which more bond sources are available to responsible operators and regulators are more confident that reclamation will be timely and successful. This should be done by bringing together all relevant parties, including surety representatives, coal mine operators—particularly smaller operators—environmental groups, and state officials. Among the matters that should be discussed are

- whether or not the liability period for reclamation bonds could be shortened without negatively affecting the environment;
- whether state bond pools could be developed in additional states as alternative bonding mechanisms;
- whether innovations in underwriting reclamation bonds could be introduced without increasing the risk of bond forfeitures.

Agency Comments

At the request of the Subcommittee, GAO did not request agency comments for this report.

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Abbreviations

GAO	General Accounting Office
OSMRE	Office of Surface Mining, Reclamation and Enforcement
SAA	Surety Association of America
SMCRA	Surface Mining Control and Reclamation Act of 1977

Introduction

Background

Coal is an important natural resource for the United States, producing about 24 percent of all the nation's energy. However, coal mining can result in damage to the environment, including soil erosion and water pollution. Some coal-producing states enacted environmental legislation in the late 1930's to control these effects, but these laws allowed varying degrees of protection. By the early 1970's, the Congress had become increasingly aware of the failure of a number of states to regulate surface coal mining operations adequately.

For this reason, the Congress enacted the Surface Mining Control and Reclamation Act (SMCRA, Public Law 95-87) on August 3, 1977. The act established a framework for the nationwide regulation of coal mining and reclamation operations after August 3, 1977, and created the Office of Surface Mining, Reclamation and Enforcement (OSMRE) within the Department of the Interior to oversee the development of state regulatory programs and to ensure compliance with the act.

SMCRA prescribes uniform, minimum environmental protection standards and requires concurrent land reclamation, to the greatest extent possible, to control the surface effects of both underground and surface mining operations. Before engaging in coal mining activities, all coal operators are required to obtain a permit. One of the permit conditions is that an operator must post a performance bond with the regulatory authority to guarantee that mined land will be properly reclaimed. Although this requirement can be fulfilled through a variety of financial assurance mechanisms, most operators post a third-party bond underwritten by a surety company.

The Congress is still deeply interested in the environmental effects of coal mining and the law's effectiveness in ensuring that coal-producing land is restored approximately to its original condition. Some concern has been raised recently that coal mining companies wanting to purchase surety bonds to comply with the law have been unable to do so and that their inability has been aggravated by the failure of several surety companies that previously wrote reclamation bonds. For this reason, the chairman of the House Subcommittee on Environment, Energy, and Natural Resources of the House Committee on Government Operations asked us to examine the cost and availability of reclamation bonds for surface mining.

Federal and State Roles in Regulating Mining

Under the 1977 act, the responsibility for regulating mining operations is shared by the federal and state governments under a regulatory model common to much of the environmental legislation of the 1970's. SMCRA established federal standards for the protection and restoration of mined lands and encouraged the states to implement their own regulatory programs, in order to adapt these standards to meet their individual mining and reclamation requirements.

States that wanted primary jurisdiction over surface coal mining and reclamation operations within their borders could submit a state program plan to OSMRE demonstrating that they would meet the statutory provisions. Upon the approval of a state's program, the state received federal funding to help establish and continue the support of the regulatory authority. OSMRE assumed an oversight role to ensure proper state administration of the program, retaining the right, however, to take enforcement action or even to reassume primary regulatory responsibility if the state proved delinquent in enforcing the law.

The act provided for considerable time to elapse before permanent regulatory programs would be established in each state. Therefore, it provided for an interim period during which OSMRE would enforce a program with less detailed requirements and less frequent inspections than would be required of states under a permanent program. For example, mine operators during the interim period were required to backfill, regrade, and revegetate the land during reclamation. The permanent program added key requirements to stabilize and protect surface areas to control soil erosion and water pollution. While OSMRE was required to inspect mining operations twice a year during the interim period, under the permanent program states must perform monthly inspections.

In August 1987, 24 of the 27 coal mining states had "primacy" for regulating coal-mining operations. Each of these have enacted laws consistent with the federal statute and have developed programs approved by the Secretary of the Interior. However, in the three remaining states, OSMRE is the regulatory authority and is responsible for implementing the permanent program provisions of SMCRA.

Reclamation Bond Requirements

In order to obtain a mining permit under the permanent program, operators must post a bond to guarantee the proper reclamation of mined land. The bond can take various forms: including surety bonds, cash, check, money order, letter of credit, certificate of deposit, negotiable

bonds, securities or real property. SMCRA requires that a bond be adequate to allow the state to reclaim the land if the operator is unable or unwilling to do so but allows the states a variety of methods of estimating bond adequacy for individual mine sites. For example, Kentucky employs a relatively complex formula incorporating a variety of considerations, including surface acreage, volume and acidity of overburden,[1] and the concentration of specific metals in nearby surface water. Ohio simply applies a flat rate of $2,500 per acre. The minimum bond amount under SMCRA for any permit is $10,000.

Period of Liability

Under a permanent program, reclamation bonds cannot be fully released by the regulatory authority until the coal operator fulfills all reclamation requirements. The law, however, allows for partial bond release on a schedule corresponding to three reclamation phases:

1. At the completion of backfilling, regrading, and drainage control procedures, up to 60 percent of the total bond amount may be released;

2. Upon revegetation of the disturbed area, an additional portion of the bond may be released;

3. After all reclamation requirements have been satisfied, the remaining portion of the bond is released.

In all four states which we studied the maximum portions of the original bond eligible for release at the completion of each phase are 60 percent, 25 percent, and 15 percent respectively. Any partial bond release, however, must leave an amount sufficient to allow a third party to complete reclamation.

Under a permanent program, complete release of a bond cannot occur for at least five years[2] after successful revegetation. This provision extends the bond liability period substantially beyond that in effect in our target states during their interim programs.

[1]Overburden is the amount of worthless rock which must be removed to expose coal for mining.

[2]Ten years in areas with low average precipitation.

Incremental and Phased Bonding

Two controversial methods have been used in some states to allow operators to post separate bonds sequentially for a single permit. The bonds correspond either to separate increments of the permitted area as they come under active mining, or to the sequential reclamation phases discussed above. With incremental bonding, the permit area is divided into discrete sections, each of which is bonded only when it is about to be actively mined. With phased bonding, an operator posts separate bonds as he enters each of the three reclamation phases distinguished by SMCRA. By using these methods operators are able to limit the amount of total bond outstanding at any one time, and thus increase their likelihood of obtaining additional credit.

In October 1984, Judge Flannery of the U.S. District Court for the District of Columbia ruled that incremental and phased bonding were contrary to the original intent of SMCRA which was that bonds be posted for the entire permitted area and term of the permit.[3] OSMRE appealed the decision and in January, 1988 the U.S. Court of Appeals for the District of Columbia reversed the district court ruling on these issues.[4] It is unclear whether the decision will be further appealed. In the meantime, several states continue to accept these bonding methods.

Objectives, Scope and Methodology

The objectives of this study correspond to the request we received from the Chairman, Subcommittee on Environment, Energy and Natural Resources, House Committee on Government Operations. The Chairman requested that we assess the availability and cost of surety bonds which are commonly used to fulfill the financial assurance requirements of SMCRA, and that we examine the reasonableness of the underwriting procedures used by companies offering reclamation bonds. The following questions were posed by the committee:

- How has the use of the different financial assurance mechanisms allowable under SMCRA changed over the past decade?
- How has the number of surety companies underwriting mining reclamation bonds changed during the same period?
- Have coal operators affected by surety insolvencies been able to replace their reclamation bonds?
- How does the surety industry determine risk and set rates for mining reclamation bonds?

[3] In Re: Permanent Surface Mining Regulation Litigation, No. 79-1144, October 1, 1984, Memorandum Opinion, 21 ERC 1724, 1743-4

[4] National Wildlife Federation v. Hodel, ——F.2d——(D.C. Cir. 1988)

Coal mining operations are conducted in 27 states. A full review of all 27 states was beyond the resources available to us. Therefore, as agreed with the Chairman's office, we selected four eastern states, Pennsylvania, West Virginia, Ohio and Kentucky, for our review. These states account for approximately 80 percent of all surface mine permits issued under SMCRA. While we realized that bond conditions in these states may not be representative of conditions in all mining states, we concluded that examining the surety bond environment in these states would contribute substantially to Congress' assessment of bond availability and the factors that determine it.

To obtain a thorough understanding of the bonding issues, we reviewed relevant federal and state laws and regulations. In addition, we interviewed OSMRE officials at their Washington, D.C. headquarters and at field offices in Harrisburg, PA, Charleston, WV, Lexington, KY, and Columbus, OH.

We also interviewed state regulatory authority officials from the Pennsylvania Department of Environmental Resources, the West Virginia Department of Energy, the Ohio Department of Natural Resources and the Kentucky Natural Resources and Environmental Protection Cabinet. In addition, we interviewed responsible officials from each state's coal mining and reclamation associations.

As part of our effort to address the first two questions posed by the committee, we obtained a listing of permits issued since the enactment of SMCRA together with the financial assurance mechanisms and the source of the bonds used for each permit within our target states. Chapter 2 of this report presents the results of our analysis of these data and our answers to the first two questions.

Since October, 1984, several surety companies which wrote reclamation surety bonds for surface mine operators have become insolvent. In order to address the third question and assess the difficulty operators were having in obtaining bonds, we targeted those operators who were affected by these insolvencies and consequently had to replace bonds. We developed and mailed to these operators a questionnaire which solicited details of their experience in replacing bonds. Chapter 3 of this report presents our questionnaire findings.

To answer the fourth question and assist us in determining how bonding companies estimate risk and set rates for coal mine operators, we consulted with casualty actuaries who have extensive environmental risk

management experience. We also obtained premium and loss data on surety bonds by year from the Surety Association of America and Best's Aggregates and Averages, the major source for financial information on the insurance industry. Chapter 4 discusses how the surety industry determines risk and sets rates for reclamation bonds and discusses the profitability of the industry.

Changes in Use of Financial Assurance Mechanisms and Number of Surety Companies From 1977 to 1986

The Subcommittee requested that we examine the available evidence in an attempt to assess and quantify the reported difficulties which operators were experiencing in obtaining mining reclamation bonds. The Subcommittee posed two specific questions:

- How has the use of the different financial assurance mechanisms allowable under SMCRA changed over the past decade?
- How has the number of surety companies underwriting mining reclamation bonds changed during the same period?

In this chapter we address these questions by providing the following information for each of the four states we studied:

- summaries of interviews with federal and state officials;
- results of our analysis of the data provided by each state indicating how changes have occurred within each state from 1977 to 1986 in the number of surety companies that underwrote reclamation bonds and in the number and value of surety and non-surety bonds posted during this period.

First, however, we provide some details on the types of financial assurance mechanisms allowable under SMCRA and state laws to assure reclamation of mined lands.

Types of Financial Assurance Mechanisms Used for Reclamation Bonding Under SMCRA

To obtain primary regulatory authority for surface mining, states were required to develop bond setting systems no less stringent than those prescribed by SMCRA. Under Title V, Section 509 of SMCRA, coal mine operators must file a reclamation bond prior to obtaining a mining permit. The bond is a sum of money deposited as a guarantee against environmental destruction. The bond amount must be sufficient to assure the completion of the reclamation plan if the regulatory authority should have to do the work.

Under SMCRA, several financial mechanisms may be used to fulfill reclamation bond requirements. These include surety bonds, collateral bonds, self-bonds, and combinations of these methods.

A surety bond is an indemnity agreement payable to the regulatory authority, the state or the federal government. The mine operator executes the agreement which is supported by the performance guarantee of a surety licensed to do business in the state where the mining operation is located. As a condition for underwriting the operator's liability

the surety company may require that the operator pledge some collateral to the company. Such a collateral requirement by the surety is, however, distinct from the category of financial mechanism termed collateral bonding (see below) where collateral is deposited directly with the regulatory authority. Surety bonds are noncancellable during their terms, with the exception that surety bond coverage for undisturbed land may be cancelled with consent of the regulatory authority.

A collateral bond[1] is an indemnity agreement executed by the mine operator and supported by a deposit with the regulatory authority of one or more of the following:

- cash account;
- negotiable bonds;
- certificates of deposit;
- letters of credit;
- investment grade securities or real property;
- certified checks, money orders, money market certificates.

Self-bonding refers to an indemnity agreement executed by the mine operator or the parent company guarantor payable to the regulatory authority. Regulatory authorities typically require that the mine operator meet a number of conditions to qualify for self-bonding. For example, a coal company may have to possess an A rating or better for its most recent bond issuance, a tangible net worth of at least $10 million, or fixed assets in the United States totalling at least $20 million. Further, the total amount of self-bond may not exceed 25 percent of the coal company's net worth.

Although three of our target states recognize self-bonding as an allowable financial mechanism under their permanent programs, we found no operators who used it. According to state regulatory and trade association officials in West Virginia, Ohio and Kentucky, self-bonding is too difficult for the state to administer or for the operator to qualify for. For example, a West Virginia Mining and Reclamation Association official indicated that the state discourages use of the self-bonding provision because of the complexity of the self-bond formula and the need to closely monitor a coal company to assure that it continues to meet the

[1] We will also use the term "non-surety bond" for this group of mechanisms in order to avoid potential confusion with the collateral required by some surety companies to obtain a surety bond or by a bank to obtain a letter of credit.

financial test. According to a Mining and Reclamation Association official in Ohio, even larger operators, for whom the provision is more practical, do not use the self-bonding provision because of its administrative complexities, and because it involves a real estate lien which does not include the value of the coal when assessing the land. Although Pennsylvania regulations allow for the future development of a self-bonding program, such a program has never been implemented.

Availability of Reclamation Bonds

Surety bonds currently are and have always been the primary means of assuring that money is available to reclaim lands abandoned by mine operators. In recent years, however, there have been frequent reports of increased difficulty in obtaining reclamation bonds. OSMRE has characterized bond availability as "a very serious problem", in some cases, a "crisis". This reported difficulty has been exacerbated by insolvency of several surety companies which had underwritten reclamation bonds and the consequently increased demand for new sources of bonds. We interviewed federal, state and trade association officials about current bond availability problems. We also examined data furnished to us by the states to determine if changes had occurred in the number and face value of bonds used and the number of sureties writing bonds. The following section presents information on the current bond conditions in each of the four states examined, both the perceptions of OSMRE field officials and state and trade association officials regarding surety bond availability, and the results of our analysis of the historical data provided by the states.

Reports of Federal, State, and Industry Officials

Ohio

Ohio OSMRE field officials declined to comment on bond availability problems in Ohio because the field office does not deal directly with individual operators. According to Ohio Department of Natural Resources officials, however, Ohio is experiencing a bonding crisis. With the recent insolvency of Merchants and Manufacturers, a surety which replaced bonds for many of the operators affected by earlier insolvencies, operators could not obtain new bonds or find replacement bonds.

According to the Department of Natural Resources, the unavailability of surety bonds is particularly apparent for the small to mid-sized operators. Those sureties, if any, which still write bonds in Ohio now demand collateral or will only write bonds as part of a larger insurance services package—that is, operators must buy, for example, liability or personal insurance in addition to the bond. Ohio Department of Natural Resources officials also pointed out that a lack of bonds will prevent entrepreneurs, generally smaller companies, from entering the coal mining business because no sureties are willing to write bonds for new businesses.

According to both Ohio Department of Natural Resources officials and an Ohio coal operator who lost bonds due to insolvencies, the unavailability of bonds affects Ohio far more than Pennsylvania, Kentucky or West Virginia. Ohio is a single seam state; that is, coal deposits are found in only one layer or seam. For this reason, Ohio must double or triple the number of acres mined to produce the same amount of coal as Pennsylvania, Kentucky or West Virginia, which are multiple seam states. Thus, more acres must be disturbed, and proportionately larger bond amounts must be posted for less production than in the other states.

Pennsylvania

Pennsylvania OSMRE field officials indicated that several factors had contributed to make the surety industry reluctant to write reclamation bonds. First, the SMCRA requirement of a bond liability period including at least five years of successful revegetation has created uncertainty in the surety industry about the length of time before final bond release. Other factors which may affect the availability of bonds include the condition of the current coal market and the quality of coal being mined in Pennsylvania. With the current drop in oil prices, coal's price advantage has been severely diminished. In addition, Pennsylvania is at a particular disadvantage because of the high sulphur content of much of the state's coal. Pennsylvania operators find it difficult to compete with other states' coal markets because they have an added cost of cleaning the coal before selling it. Coal production in Pennsylvania has declined and Pennsylvania now imports coal from Kentucky. Given the uncertain future of the coal market generally, and of Pennsylvania's market in particular, sureties are hesitant to write bonds.

According to Pennsylvania state regulatory authorities, sureties state that they are willing to write bonds for Pennsylvania operators, but they are closely scrutinizing operators' requests for bonds. The Pennsylvania Bureau of Mining and Reclamation Director stated that bonds

may be available, but operators cannot afford the amount of collateral the sureties require in order to write a bond. For this reason, coal operators are using surety bonds as a financial instrument less frequently and are now relying more heavily on collateral bonds, particularly certificates of deposit. Although Pennsylvania operators lost bonds due to surety insolvencies that occurred in 1985, the state regulatory authorities indicated that Pennsylvania had recovered from these insolvencies. State officials believe that this recovery was due to intervention on the part of the Pennsylvania Insurance Commission to resolve the problem by meeting with state, industry and surety representatives to arrange bond replacement for the affected operators.

West Virginia

OSMRE field officials in West Virginia reported that they were not aware of bonding problems in the state, but acknowledged that such problems might exist without their knowledge since they do not consider their oversight role to involve them with the day-to-day problems of the individual coal operator. State regulatory officials, however, portray a bleak picture of bond availability. According to West Virginia Department of Energy officials, obtaining surface mining reclamation bonds can no longer be taken for granted.

Traditionally, sureties wrote bonds based upon a company's financial health; now bonds are written only for the large established customers who must buy a package of other services offered by the surety in order to obtain a bond. Those sureties which continue to write reclamation bonds require 40 to 50 percent collateral for their established clients and 100 percent collateral for any new business. Cash, equipment or property may be pledged as collateral. Although the West Virginia Department of Energy officials did not have the full information necessary to analyze the bonding problems, they expressed the belief that the current surety bond climate is not simply a symptom of the poor financial health of some individual coal companies, but an indication of an overall surety reluctance to write reclamation bonds.

Both the state regulatory authority and the West Virginia Mining and Reclamation Association cited SMCRA as the cause of surety unwillingness to write bonds. SMCRA requires a minimum five year revegetation period; however, state and trade officials believe that revegetation could be successfully accomplished in two years. This five year liability period after mining operations have ceased serves as a disincentive for underwriting reclamation bonds, particularly since sureties have yet to see any bonds fully released by the state because insufficient time has

elapsed from the beginning of West Virginia's permanent program for this requirement to have been fulfilled.

According to West Virginia Department of Energy officials, since fewer sureties are willing to write bonds, coal operators' use of collateral bonds has increased markedly. For example, West Virginia state officials noted that, since 1984, coal operators, particularly smaller operators, have been more frequently relying on certificates of deposit and letters of credit to satisfy the bond requirement. This observation is supported by our analysis of West Virginia data.

Kentucky

In the opinion of Kentucky OSMRE field officials, Kentucky is not experiencing bonding problems, but sureties have become more selective in writing bonds. According to these officials, mine operators are still obtaining bonds but the field office does not know the provisions under which the bonds are being written.

The Kentucky state regulatory authorities presented a different view of the bonding situation. According to Kentucky state officials, coal mine operators, particularly the small, independent operators, are experiencing difficulty obtaining bonds because, unlike in the past, sureties frequently require substantial collateral—sometimes 50-100 percent of the bond's face value—before writing a bond and the small operators are unable or unwilling to provide such collateral. For this reason, the Small Coal Operators Advisory Council has recommended an alternative bonding system, known as a "bond pool". The bond pool will maintain a fund derived from membership fees scaled according to the applicant's violation history and a tonnage fee on coal mined. Membership in the pool is voluntary and will satisfy the requirement to post reclamation bonds.[2] The pool is intended to enable small operators to obtain coverage without excessive initial expenses, and to assure that funds are available for reclamation. Kentucky's bond pool was approved by the state legislature in 1986 and received final OSMRE approval in March, 1987.

The Kentucky state regulatory authority as well as the Kentucky Mining and Reclamation Association believe that the problem of bond availability is largely caused by SMCRA's extended liability requirements. According to both groups, sureties are reluctant to accept liability for the five

[2]Supplemental funds also exist in Ohio, Pennsylvania, and West Virginia to provide additional resources in the event that a forfeited bond is not adequate to complete reclamation. Contributing to these funds, however, does not satisfy bonding requirements.

years of revegetation required by SMCRA, particularly when this period may be extended if revegetation is judged unsuccessful. This concern has prompted the decline in the number of sureties willing to write bonds. As a consequence, sureties either write bonds only for certain select customers or have left the market altogether.

Historical Trends in State Bond Data

From each of our four target states we obtained computer-based lists of individual financial assurance mechanisms used to fulfill permit requirements. In general, these listings contained all permits issued by the states since 1977 and included the permittee, or coal operator; the permit issuance date; the number of acres originally bonded and the amount of that bond; the current acreage and bond amount; and the source of the bond (surety company or bank).

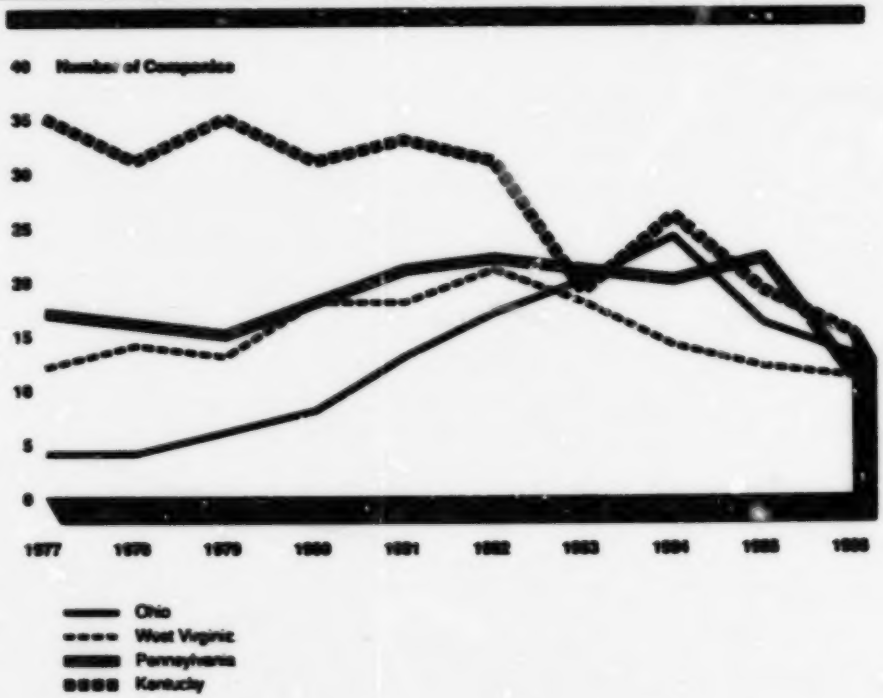
We aggregated these data by year and by state and examined them for changes in the number of sureties writing reclamation bonds during this period, in the number and face value of bonds posted, and in the relative use of surety and non-surety (i.e., collateral) bonds.[3] The following pages present the results of that analysis.

Changes in the Number of Surety Companies

One indirect indicator of the availability of reclamation bonds is the number of different surety companies that actually wrote bonds for coal operators. We computed this statistic from the state-supplied data for 1977 through 1986. (See Figure 2.1.) Despite considerable variations among the states, a general pattern of gradually increasing numbers of surety companies providing reclamation bonds is visible through the late 1970's and early 1980's. By 1982, 46 different surety companies were writing reclamation bonds in these four states, but the number dropped to 26 in 1986. The fluctuations in Kentucky from 1982 to 1984 are at least partially the result of an intense effort by the state in 1984 to resolve a large backlog of repermitting applications. The modest surge in Pennsylvania in 1985 may be due in part to similar factors, but is more likely to have been the result of the state's efforts to attract more

[3]We also computed the annual use during this period of each type of non-surety bond for those states where the data were available. Appendix III contains this information.

Figure 2.1:Number of Surety Companies Writing Reclamation Bonds in Kentucky, Ohio, Pennsylvania, and West Virginia From 1977 to 1986



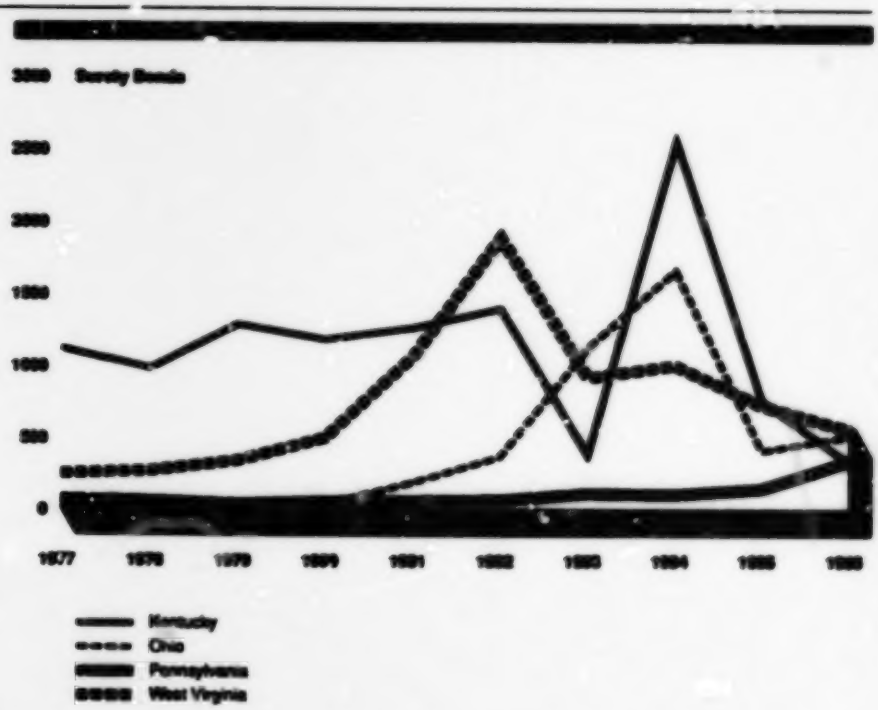
Source: Data provided by the Kentucky Department of Surface Mining Reclamation and Enforcement, the Ohio Department of Natural Resources, the Pennsylvania Department of Environmental Resources, and the West Virginia Department of Energy

companies after the insolvency that year of Union Indemnity which seriously affected the state's coal operators. While no new surety companies entered the reclamation bond market in Ohio and West Virginia from 1984 to 1986, and only one in Kentucky, five companies which had not underwritten these bonds in Pennsylvania for at least five years began or resumed providing bonds.

Changes in the Number and Value of Surety Bonds

Administrative factors appear to have been a major determinant of the absolute number of surety bonds posted in our four target states (Figure 2.2) and their face value (Figure 2.3) during the period we examined. As each state assumed primacy over the regulation of surface mine operations, it had to process large numbers of repermitting applications for operators who held interim program permits.

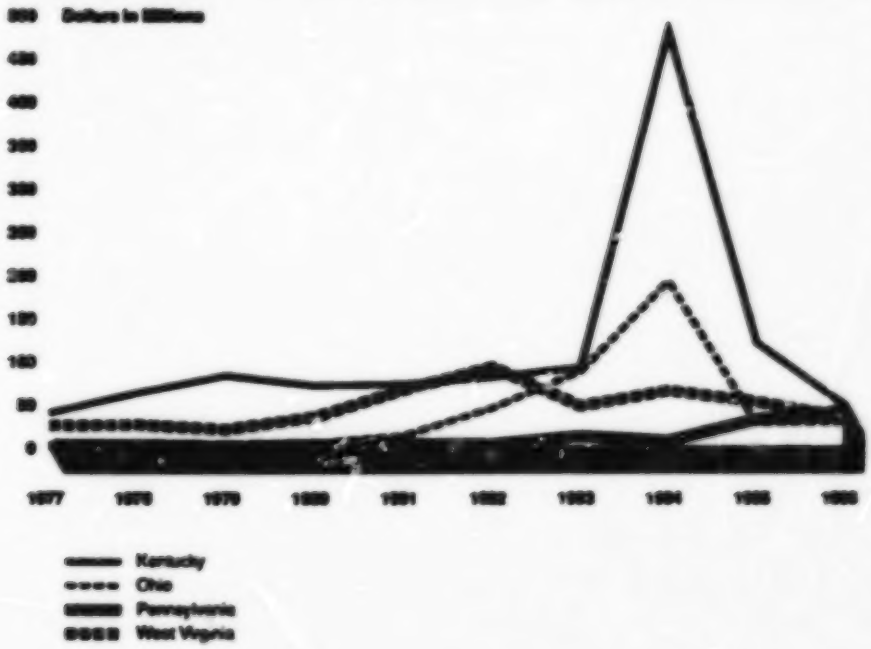
Figure 2.2:Number of Surety Bonds Posted in Kentucky, Ohio, Pennsylvania, and West Virginia From 1977 to 1985



Source: Data provided by the Kentucky Department of Surface Mining Reclamation and Enforcement, the Ohio Department of Natural Resources, the Pennsylvania Department of Environmental Resources, and the West Virginia Department of Energy

Table 2.1 displays the dates each of our four target states assumed regulatory authority. The repermitting process tended to be at its most intense between one and three years after these dates. Kentucky assigned high priority in 1984 to resolving a large backlog of repermitting applications, processing over 1,900 between March and October. Ohio also expended considerable effort in 1984 to process pending applications, for both repermits and new permanent program permits. Pennsylvania did not complete repermitting until 1986, whereas West Virginia, the first of these states to obtain primacy under SMCRA, had completed its transition of permits to the permanent program before mid-1984. These differences among the states are reflected in the patterns of bond postings during this period.

Figure 2.2:Face Value of Surety Bonds Posted in Kentucky, Ohio, Pennsylvania, and West Virginia From 1977 to 1988



Source: Data provided by the Kentucky Department of Surface Mining Reclamation and Enforcement, the Ohio Department of Natural Resources, the Pennsylvania Department of Environmental Resources, and the West Virginia Department of Energy.

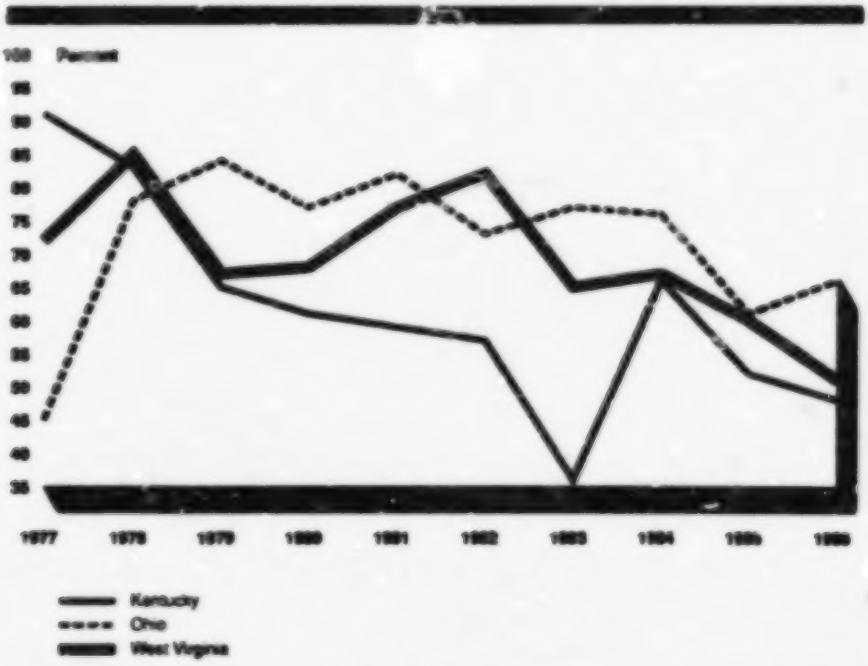
Table 2.1: Dates of Regulatory Authority Assumption for Reviewed States

State	Date
Kentucky	May 18, 1982
Ohio	August 16, 1982
Pennsylvania	July 31, 1982
West Virginia	January 21, 1981

Changes in the Relative Use of Surety and Non-Surety Bonds

While the major determinant of the number and face value of bonds during recent years appears to have been the tempo of transition to permanent program permits, the relative use of surety and non-surety bonds can be expected to be a somewhat more sensitive, although indirect, indicator of the availability of surety bonds. We computed the use of

Figure 2.4:Number of Surety Bonds Posted in Kentucky, Ohio, and West Virginia as a Percent of All Bonds From 1977 to 1986



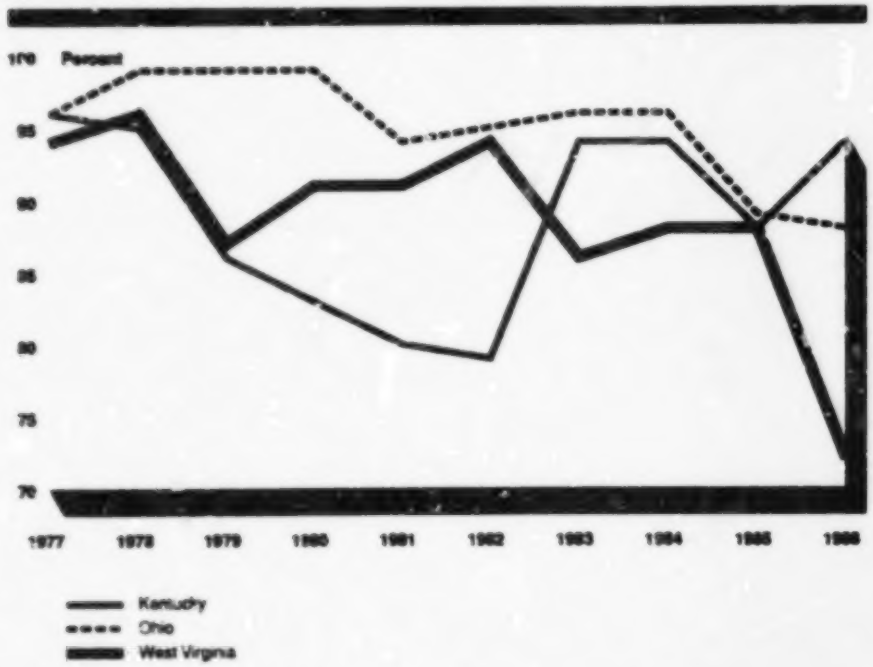
Source: Data provided by the Kentucky Department of Surface Mining Reclamation and Enforcement, the Ohio Department of Natural Resources, and the West Virginia Department of Energy.

surety bonds, both their number (Figure 2.4) and their face value (Figure 2.5) as a percent of all bond mechanisms used during this period in Kentucky, Ohio, and West Virginia.[4]

Surety bonds have clearly been the bonding mechanism of choice in these three states. From 1977 through 1986 surety bonds have averaged 63 percent of all bonds posted in Kentucky, 74 percent of bonds in Ohio, and 70 percent of bonds in West Virginia. (See Figure 2.4.) Their relative face value has represented respectively 90 percent, 95 percent, and 89 percent of all bonds posted in these states during this period.

[4]This statistic was not available for Pennsylvania since that state did not provide us with information on non-surety financial instruments.

Figure 2.5: Face Value of Surety Bonds Posted in Kentucky, Ohio, and West Virginia as a Percent of Face Value of All Bonds From 1977 to 1986



Source: Data provided by the Kentucky Department of Surface Mining Reclamation and Enforcement, the Ohio Department of Natural Resources, and the West Virginia Department of Energy

A general downward trend in the relative number of surety bonds posted occurred in all three states during this period. In 1977, 91 percent of all bonds used in Kentucky were surety bonds, but by 1986 only 48 percent were surety bonds. Similarly, West Virginia's use declined from 72 percent to 51 percent. While in 1977 only 45 percent of Ohio's bonds were surety bonds, by 1979 this statistic had reached 84 percent. By 1986 it had dropped to 66 percent.

Similar, but less dramatic declines in the relative face value of surety bonds occurred during this period: 2 percent in Kentucky, 8 percent in Ohio, and 22 percent in West Virginia.

Summary

In this chapter we reported the views of federal and state officials and representatives of coal mine operators concerning changes in the availability of surety bonds. We also examined historical data from the states to obtain independent verification of these reports. While some OSMRE

field offices declined to characterize bond availability as a serious problem, state officials and industry representatives in Kentucky, West Virginia and Ohio agreed with the view expressed by OSMRE's headquarters personnel that it represented a serious problem, if not a crisis. Officials in these states reported that it had become increasingly more difficult for operators, particularly smaller operators, to obtain surety bonds. The historical data we analyzed was generally consistent with a pattern of diminishing availability. We found that surety bonds have historically proven to be the most frequently used financial assurance mechanism in the states we reviewed. However, since 1984 there has been an increasing reliance on non-surety guarantees of reclamation. Pennsylvania officials also reported an increased reluctance by sureties to write reclamation bonds, but believe that joint action by state regulatory authorities and the state insurance commission had alleviated the problems associated with the insolvency of one surety which had written reclamation bonds in the state.

Reclamation Bond Availability for Operators Affected by Surety Insolvencies

As its third question, the Subcommittee asked:

- Have coal operators affected by surety insolvencies been able to replace their reclamation bonds?

To obtain the information needed to respond adequately, we mailed a questionnaire to the operators in Kentucky, Ohio, Pennsylvania and West Virginia whose bonds were affected by surety insolvencies. In this chapter we present our findings on the size and type of the operations affected, the success of operators in obtaining replacement surety bonds, the extent of replacement accomplished through non-surety (i.e., collateral) bonds, and the factors which appear to affect the ability of operators to obtain new surety bonds.

Between July, 1985 and February, 1987, seven surety companies which had underwritten reclamation bonds in the states of Kentucky, Ohio, Pennsylvania and West Virginia became insolvent. For operators who had been bonded by these surety companies the effect of these insolvencies was the loss of an essential prerequisite to mining under SMCRA; i.e., the financial guarantee that the land they had been permitted to mine would be reclaimed. The affected operators were required either to replace their bond with another surety bond or with one of the other bonding mechanisms allowable under SMCRA (certificate of deposit, letter of credit, cash, etc.), or to cease mining operations on the land whose reclamation had been guaranteed by these bonds.

Table 3.1 presents the details of the surety insolvency problem within the four surface mining states with the largest number of permits. More than $50 million of bonds had to be replaced. The impact of these seven insolvencies was relatively smaller in Kentucky and West Virginia than in Ohio and Pennsylvania where the cumulative affected bond amount exceeded half these states' average annual bond volume.

Table 3.1: Insolvent Sureties: Date of Liquidation and Affected Bond Amount by State

	Date of Liquidation	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Union Indemnity	Jul-85	$3,635,575	$5,791,355	$18,254,266	$1,013,500	$28,694,696
American Fidelity Fire	Mar-86	$1,132,970				$1,132,970
American Druggist	Apr-86	$4,144,263	$1,619,233	$824,995	$890,100	$7,478,591
Allied Fidelity	Jul-86	$1,209,232	$678,267		$238,500	$2,155,999
Merchants & Manufacturers	Aug-86		$7,328,040			$7,328,040
Integrity	Mar-87	$2,715,117				$2,715,117
Fortune Assurance	Jul-87			$3,454,269	$3,454,269	
Total		**$12,837,157**	**$15,416,895**	**$22,533,530**	**$2,172,100**	**$52,959,682**
Statewide Surety Volume Annual Average 1985-1986		$83,868,896	$27,520,833	$36,207,279	$42,527,100	$190,124,108

Survey of Affected Operators

We sought to collect information concerning the difficulty which operators affected by these surety insolvencies had experienced in obtaining replacement bonds. We reasoned that this group, having been forced to enter the bond market during a relatively short period of time and under similar circumstances, would provide useful information which would allow us to quantify bond availability and to identify interstate or other differences affecting an operator's ability to replace bonds.

We also recognized that this group might prove quite elusive. It seemed likely that a disproportionately large number of these operators would have left the coal mining business if they were unable to replace bonds, and hence would not be locatable. Respondents to our questionnaire, therefore, would be, to an undefinable extent, more likely to have been successful in replacing surety bonds, or in finding some other means of meeting bonding requirements, than non-respondents. To the extent to which this consideration introduced bias into our results, it would result in an understatement of the bonding problem. This concern appears to have been well-founded, at least in the state of Kentucky.[1] Our estimate of the difficulty operators had in replacing their bonds must therefore be considered a conservative estimate of the tightness of the surety bond market.

We developed a questionnaire requesting information from the affected operators about their coal operations, their perceptions about bond

[1]For a discussion of the difficulties we encountered in locating some operators, particularly in Kentucky, and of the extent to which these difficulties must qualify our findings, see Appendix I.

availability, and details of the financial mechanism(s) they used to replace each bond affected. In particular we sought to discover whether a bond had been released by the state, replaced with another surety bond or with some other financial mechanism, or left unreplaced, and what the financial consequences of the insolvencies had been for the operator.[2]

We mailed this questionnaire to each of the affected operators. The questionnaire we developed is attached as Appendix II. The remainder of this chapter will present the results of our analysis of responses to the survey.

Size and Type of the Affected Operations

Table 3.2 provides details on the number of operators and bonds included in our survey analysis within each state. Our universe includes 321 operators.[3] We sought to determine the disposition of 1,338 bonds, worth $50 million, which had been posted by these operators in connection with 854 permits.[4]

Table 3.2: Number of Operators, Permits, Bonds, and Face Value of Bonds Included in Survey

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Operators	207	35	46	33	321
Permits	411	107	272	64	854
Bonds	505	287	478	67	1338
Bond amount ($ Millions)	$12.9	$15.4	$19.1	$2.2	$49.5

The average size of the operations of companies affected by surety insolvencies varied from about 53 thousand tons per year in Kentucky to over 176 thousand tons in Pennsylvania. As Table 3.3 shows, operations in Ohio and Pennsylvania were on average more than twice as large as those in Kentucky and West Virginia.

[2]Bonds are released in phases corresponding to completion of each of the three reclamation phases: mining, seeding, and revegetation. Their release is contingent upon state inspection and approval. Bond release is discussed more fully in Chapter 1.

[3]A total of 383 operators in our four states have been affected by the insolvency of the 7 sureties listed in Table 3.1. At the time of our questionnaire mailing, however, Pennsylvania Department of Environmental Resources had not formally notified the 66 affected clients of Fortune Assurance of their need to seek replacement bonds. For this reason we have excluded them from our analysis.

[4]Multiple bonds can be associated with a single permit either because the surety prefers to divide its obligation into smaller portions or because of incremental bonding as described in Chapter 1.

Table 3.3: Average Tonnage Produced by Affected Operators at Time of Surety Insolvency

State	Tons
Kentucky	53,587
Ohio	168,851
Pennsylvania	176,307
West Virginia	67,705
Total	**131,839**

Most of the coal these companies produced was destined for sale to electrical utilities. (See Table 3.4.) Except in West Virginia, where long-term coal contracts predominated, most operators sold their coal on the spot market.

Table 3.4: Distribution of Coal Produced by Affected Operators

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
End users					
Electrical utilities	45.8%	73.6%	62.9%	73.6%	64.8%
Industry	30.4%	24.9%	13.3%	19.5%	21.5%
Private sales	23.8%	1.5%	16.2%	0.0%	10.4%
Export outside U.S.	0.0%	0.0%	2.8%	6.9%	1.8%
Other	0.0%	0.0%	4.9%	0.0%	1.6%
Market types					
Long-term	25.0%	30.7%	27.5%	57.5%	31.9%
Short-term	7.1%	8.3%	18.2%	3.8%	10.4%
Spot market	67.9%	61.0%	48.0%	38.8%	55.8%
Other	0.0%	0.0%	6.3%	0.0%	1.9%

Methods Used to Replace Surety Bonds

Survey respondents provided us with information on the types of financial mechanisms they used to replace their bonds, and the amount of the face value replaced through each method. We found wide variation among the states. Table 3.5 summarizes the type of mechanisms used within each state.

Nearly one-third of all operators failed to replace their bonds. Kentucky experienced the highest failure rate (56.3 percent). Only 9.1 percent of Pennsylvania's operators failed to replace bonds. While the most fre-

Table 3.5: Percent of Affected Operators Using Various Bonding Mechanisms to Replace Surety Bonds

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Certificate of Deposit	25.0%	27.3%	13.6%	30.0%	22.9%
Letter of Credit	25.0%	40.9%	18.2%	20.0%	27.1%
Cash, Check, Money Order	6.3%	13.6%	0.0%	20.0%	8.6%
Surety Bond	6.3%	27.3%	72.7%	0.0%	32.9%
Other	0.0%	13.6%	0.0%	10.0%	5.7%
None	56.3%	40.9%	9.1%	20.0%	31.4%

Note: Column totals may exceed 100 percent because multiple mechanisms were frequently used by individual operators

quently used replacement mechanism was another surety bond, this was not true in all states. None of the West Virginia respondents and only one Kentucky operator reported obtaining a new surety bond, as did fewer than one-third of the Ohio operators. In these three states the most frequently used replacement methods were letters of credit or certificates of deposit. By contrast, 72.7 percent of Pennsylvania respondents were able to find new surety companies to underwrite at least one of their affected bonds.

Table 3.6 displays the dollar amounts of the affected bonds, and how these were accounted for by the responding operators. Although, as noted earlier, nearly one-third of all operators failed to replace any of their bonds, only 20 percent of the original bonds' face value remains outstanding.[5] However, in Kentucky 68 percent was unaccounted for, as opposed to less than 5 percent in both Pennsylvania and West Virginia.

Ten percent of the affected bond amount did not need replacement, since the states judged reclamation requirements had been satisfied and the bonds were released. At the time of our survey, Pennsylvania and Ohio operators had been the most successful in replacing bonds. Their combined replacement value represents $19.6 million, or nearly 93 percent of all bond amount replaced. While in both states most of the replacement was accomplished through new surety bonds, Pennsylvania operators had obtained a substantially greater amount of surety underwriting.

[5]This contrast is a function of the relatively greater ease with which larger operators were able to replace their bonds. See Company Size as a Determinant of Bond Availability later in this chapter.

Table 3.6: Amount of Affected Surety Bonds Released or Replaced by Different Bonding Mechanisms

	Kentucky		Ohio		Pennsylvania		West Virginia		Total	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Released	$50,000	2.0%	$1,874,410	13.7%	$1,082,435	8.3%	$98,259	10.3%	$3,105,104	10.3%
Replaced	$732,385	29.6%	$8,614,127	63.0%	$10,974,247	83.9%	$776,741	81.7%	$21,097,500	69.9%
Certificate of Deposit	$119,585	4.9%	$351,445	2.6%	$294,306	2.3%	$426,741	44.9%	$1,192,077	4.0%
Letter of Credit	$532,600	21.7%	$1,058,338	7.7%	$246,270	1.9%	$47,000	4.9%	$1,884,208	6.2%
Surety Bond	$78,200	3.2%	$7,167,625	52.4%	$10,433,671	79.8%	$0	0.0%	$17,679,496	58.6%
Other (cash, check, etc.)	$2,000	0.1%	$36,719	0.3%	$0	0.0%	$303,000	31.9%	$341,719	1.1%
Outstanding	$1,676,590	68.2%	$3,192,673	23.3%	$1,019,960	7.8%	$75,500	7.9%	$5,964,723	19.8%
Total	**$2,458,975**	**100.0%**	**$13,681,210**	**100.0%**	**$13,076,642**	**100.0%**	**$950,500**	**100.0%**	**$30,167,327**	**100.0%**

In Kentucky and West Virginia surety bonds appear to have been virtually unavailable. Most of the bond amounts that were replaced in Kentucky were based on letters of credit, while in West Virginia certificates of deposit were more common. Nearly one-third of all replacement in West Virginia was accomplished by operators depositing cash or cash equivalents directly with the state.

Financial Effects on Operators

We asked operators about various ways in which they might have suffered financial loss because of surety insolvency. Clearly, the largest drain on cash flow was represented by the encumbrance of their liquid assets when operators had to replace surety bonds with certificates of deposit or some other non-surety bond mechanism. In addition, we attempted to determine the amount of collateral, if any, which sureties required before underwriting new surety bonds and the amount of collateral which operators pledged to receive a letter of credit. We also inquired about assorted other consequences of the insolvencies.

Collateral

Table 3.7 presents the collateral required for new bonds and for letters of credit as reported by our respondents. While the total collateral for both mechanisms is approximately equal, collateral required by sureties represented only 14 percent of the face value of the new bonds, while operators had to provide more than 60 percent of their face value to obtain letters of credit.

Table 3.7: Average Amount of Collateral Required to Replace Affected Bonds and Average Collateral Rate

	Kentucky		Ohio		Pennsylvania		West Virginia		Total	
	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate
Surety Bond	$0	0.0%	$22,107	7.4%	$25,562	17.9%	NA[a]	NA	$11,763	14.0%
Letter of Credit	$9,538	50.0%	$32,765	71.6%	$5,532	75.0%	NA	NA	$12,547	61.5%
Total[b]	$9,538		$54,872		$31,834		NA		$24,310	

[a]Not applicable

The comparison may be misleading, however. Although the majority of operators who obtained new surety bonds reported pledging no collateral, two operators had to pledge 100 percent collateral for their new bonds. Several respondents to our survey also reported that they had chosen not to replace their bond with another surety bond because sureties were requiring 100 percent collateral. As one operator commented: "If I had 100 percent collateral, I wouldn't need [a bonding company]."

Other Consequences

Operators reported other consequences of their bond loss because of surety insolvencies. These included suspension or permanent closure of mining operations, employee layoffs and legal expenses. They are summarized by state in Table 3.8.

Table 3.8: Summary of Other Effects of Insolvencies on Operators

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Percent left business or filed for bankruptcy	31.3%	19.0%	4.3%	0.0%	14.9%
Week(s) suspended operations	1	29	26	20	76
Employees laid off	41	106	152	30	329
Legal expenses	$26,000	$126,600	$74,000	$5,000	$231,600

Operator Opinions Concerning Bond Availability

We asked operators to report their perceptions about the attributes of a coal mine operation which were most important in obtaining bonds and about the importance of the problems they experienced in obtaining replacement bonds.

Coal Company Attributes

Table 3.9 summarizes the relative importance of various company attributes in determining their ability to obtain bonds. Operators in all states ranked a company's financial condition as the major determinant

of bond availability and rated the size of the bond sought as second. The size of the company or of the operation being bonded were also judged to be important factors. Whether a company owned or leased the land, was owned by a foreign corporation, or was a subsidiary of a larger company were not generally perceived as seriously affecting bond availability.

There were also interstate differences of opinion about the importance of company size: Pennsylvania and Ohio operators considered size substantially more important than did operators in Kentucky and West Virginia.

Table 3.9: Perceived Importance of Company Attributes in Determining Ability to Replace Bonds[a]

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Financial condition	4.2	4.5	4.6	4.3	4.4
Bond size	3.8	3.7	3.8	3.6	3.7
Size of company	2.8	3.6	3.1	2.6	3.1
Size of operation	3.2	3.6	2.4	3.1	3.0
Status of contracts	2.7	3.2	2.0	3.0	2.7
Time in business	2.5	3.1	2.4	1.9	2.6
Independent company	3.0	3.0	2.1	2.0	2.5
Partial bond release	3.4	2.7	1.5	1.3	2.2
Company a subsidiary	1.3	1.4	1.1	0.4	1.1
Company-owned land	1.9	1.4	0.8	0.5	1.1
Foreign ownership	1.2	1.4	0.4	0.4	0.8
Other	0.8	0.5	1.7	1.1	1.1

[a]Based on a 0-to-5 scale where 0 = "no importance" and 5 = "great importance."

Problems in Obtaining Replacement Bonds

Operators ranked different aspects of bond costs and availability by their perception of their importance. Table 3.10 summarizes these responses. The simple unavailability of reclamation bonds ranked highest in importance, while the rate charged by surety companies and the need to purchase other coverage appear to be less important to the respondents. The collateral required by surety companies was also perceived to provide a major problem to operators seeking reclamation bonds.

Table 3.10: Operator Ranking of Importance of Problems Associated With Obtaining Replacement Bonds[a]

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Surety refusal	3.6	4.8	3.7	4.4	4.1
Collateral	4.0	4.1	2.7	3.0	3.4
Bond rate	3.4	2.4	2.9	1.3	2.6
Bond contingent on other purchase	2.9	2.2	2.0	2.0	2.2
Other	0.3	0.8	1.2	1.4	1.0

[a]Based on a 0-to-5 scale where 0 = "no importance" and 5 = "great importance."

Company Size as a Determinant of Bond Availability

We analyzed the questionnaire responses for differences associated with the size of mining operations by sorting respondents into two groups: operators producing 100,000 tons or more annually, and those producing less than 100,000 tons. In particular, we examined the proportion of the affected bond face value which was replaced by other surety bonds, and the collateral required by the replacement surety. We found significant differences between small and large operators in their ability to find replacement bonds. (See Table 3.11.)

Table 3.11: Percent of Affected Bond Amount Replaced With Second Surety Bond in Large Versus Small Companies[a]

	Large	Small
Kentucky	0.0%	4.4%
Ohio	68.1%	0.3%
Pennsylvania	86.8%	35.2%
West Virginia	0.0%	0.0%
Total	**74.7%**	**9.8%**

[a]Large = 100,000 tons or more; small = less than 100,000 tons.

While large operators were able to replace nearly three-quarters of their outstanding bonds with new bonds, small operators averaged less than a 10 percent replacement rate. As Table 3.12 demonstrates, small operators also pledged a larger portion of the replacement bond's face value as collateral than did large operators.

Table 3.12: Average Collateral Rate Paid by Large and Small Operators[a]

	Large	Small
Kentucky	NA[b]	0.0%
Ohio	8.9%	0.0%
Pennsylvania	10.0%	37.5%
West Virginia	NA[b]	NA[b]
Total	**9.8%**	**25.0%**

[a]Large = 100,000 tons or more; small = less than 100,000 tons.

[b]Not applicable.

Summary

Within slightly more than a year and a half, seven surety companies which had underwritten mining reclamation bonds became insolvent. More than $50 million worth of bonds were affected in our four target states. In order to respond to the committee's third question ("Have coal operators affected by surety insolvencies been able to replace their reclamation bonds?"), we surveyed these operators using a mailed questionnaire. Respondents to our survey had replaced or otherwise accounted for 80 percent of their affected bonds. This replacement rate, however, was not constant across states. In Kentucky more than two-thirds remained outstanding.

The methods used to replace these bonds also varied considerably across states. Replacement surety bonds were apparently unavailable to operators in Kentucky and West Virginia who relied on certificates of deposit, letters of credit, or some other collateral pledged to the state to replace their bonds.

Action by state government can apparently have some effect on alleviating bonding problems. In Pennsylvania, where state officials had actively sought out new surety companies to underwrite their bonds (see Chapter 2), 80 percent of outstanding bonds were covered by new surety bonds. This statistic may be misleading, however. Most of the impact of surety insolvencies was felt early in Pennsylvania, which until recently had been spared the multiple shocks experienced by other states. (See Table 3.1.) As we noted earlier, we were forced to exclude operators affected by Fortune Assurance's recent insolvency from our analysis because at the time of our survey they were under no official compulsion to seek replacement bonds. Fortune Assurance's insolvency affected only Pennsylvania operators, and we do not know how successful these operators will be in finding new bonds.

We also found some evidence to substantiate the reports described in Chapter 2 of increased collateral being demanded by surety companies. This increase fell most heavily on smaller coal companies, which also were able to replace a much smaller portion of their affected bonds with new surety bonds than were larger companies.

The problem most frequently cited by operators in replacing their bonds was their inability to locate a surety company willing to write reclamation bonds. They also found difficulty with the collateral rate required by the surety companies who were offering bonds. Most operators found the bond rate charged by surety companies only a small problem.

Chapter 4

Risk Determination in Writing Surety Bonds

The final question posed by the Subcommittee was "How does the surety industry determine risk and set rates for reclamation bonds?" To answer this question, we interviewed representatives of the surety industry and analyzed financial data and other information they provided. We also examined financial data presented in A. M. Best's Aggregates and Averages on surety companies and the property/casualty insurance industry as a whole. In this chapter we present the surety industry position, and review how risk is determined for mining reclamation bonds. We also examine the recent loss history of surety reclamation bonds, other surety bonds, and the property/casualty insurance industry as a whole. Finally, we present some possible remedies to the problem of reclamation bond availability.

Surety Bonds and Other Insurance Lines

Mining reclamation bonds represent a tiny fraction of the property/casualty insurance business. Approximately one percent of all surety bonds written from 1980 through 1985 were reclamation bonds. The entire surety bond line accounted for less than one percent of the total property/casualty premiums earned during this period.

Surety industry representatives point out that they provide a product which differs in important aspects from that provided by other insurance lines. Like insurance, surety bonds are risk transfer mechanisms. In the case of mining reclamation bonds, the risk of the surface mine operator failing to perform reclamation is transferred from the public or governmental agency to the surety. For a fee, the surety company promises to pay a predetermined sum of money to the state regulatory authority in the event that the coal operator does not fulfill the reclamation obligation. However, surety differs from insurance in several ways. First, with insurance, the insured pays the premium and receives the benefit of the policy. With a bond, the coal operator posts the bond and pays the premium but the state receives the benefit.

Another difference between the insurance and the surety industries concerns the underwriting process. While the insurance industry's underwriting process is based upon loss history and experience, underwriting for the surety industry is based upon credit principles. With insurance, underwriting and pricing are based upon the spread of risk. Losses are expected and the premiums serve as a source of funds to pay the losses. In contrast, underwriting for surety bonds is based upon the credit appraisal of the coal operator. Losses are not expected and no margin

for error exists. Surety bond premiums, usually equal to one to two percent of the bond amount, are used primarily to cover the expense of conducting the credit appraisal.

With insurance, most policies may be unilaterally cancelled. However, while some surety bonds are cancellable, most are not. Once executed, surety bonds must remain in force until the bonded party has fulfilled its obligation.

Surety Concerns About Reclamation Bonds

According to surety representatives, current stringent underwriting standards are a direct result of the bonding provisions mandated under SMCRA. Surety officials cite underwriting problems that SMCRA presents, including length of obligation and bond size.

First, the surety underwriter must commit to a long term obligation under the existing law. Bonds are in force for at least seven years and their term can become much greater depending upon revegetation and bond release provisions. While permits are generally issued for five years, they are subject to extension. The revegetation period may add five to ten years to the obligation depending upon geographic location. Surety companies find it difficult to foresee the future financial condition of most coal operators for more than one or two years. According to one surety representative, the ultimate measure of underwriting success or failure is not whether an operator financially qualifies for a bond today, but whether the operator will have the financial resources to meet reclamation obligations in the future. The limit of his surety credit is determined by the bond liability which will be outstanding at any one time, and this liability can be expected to grow as the operator seeks to mine additional acreage in part to meet the reclamation costs of land already mined.

A second area of concern for surety companies is the size of the bond. Surety bond underwriters fear that changes in conditions or technology may require unexpected increases in the bond amount during the time the commitment is in force. If this were to occur, the surety company would be forced either to increase its financial guarantee or accept the risk that its rejection of the new bond would drive the operators into default, and eventually cause forfeiture of the original bond. Bond amounts are based on the estimated cost to the regulatory authority to perform the reclamation. Some large scale surface mining projects can generate bond requirements as large as $200 million. Bonds of this size may be difficult to obtain simply because of their magnitude. Sureties

are reluctant to provide this coverage for any single company, regardless of financial strength or reclamation history. Moreover, increased bond amounts can have a saturating effect on the surety industry's capacity.

Underwriters are also apprehensive about the position of coal in the marketplace. During the past several years, coal prices have experienced a downward trend. Long-term coal supply contracts are virtually nonexistent and oil and gas prices can provide utilities with cheaper sources of generating electricity. With relatively depressed coal prices, weak demand and stockpiled coal reserves, it has become more difficult for operators, particularly the smaller operators, to strengthen their financial positions.

To mitigate some of these underwriting problems, surety representatives suggest several measures which may increase bond availability. These include:

- reinstate incremental and phased bonding to reduce both the bond amount required and the total liability at any one time;
- allow surety companies to unilaterally cancel reclamation bonds on undisturbed land;
- better define reclamation requirements;
- safeguard surety companies against potential unforeseen increases in bond amounts;
- simplify and expedite the bond release process.

However, one surety representative cautioned that, even if such measures were adopted, an availability problem will always exist for some operators. Marginal or poorly financed operators should not expect to find a ready bond market to secure their reclamation obligations. Bonds will generally be available only to those companies which are well managed and well financed.

Underwriting Practices in the Surety Industry

According to surety representatives, the determination of risk is based upon the credit analysis performed by the surety underwriter. The surety underwriter seeks to appraise the credit of the coal operator similar to the way that a bank lending officer would examine a loan applicant. The bond underwriter, acting as a credit analyst, analyzes the financial strength, character, staying power in the market, and social

and political factors affecting the applicant and the coal industry. However, the primary concern of any bond underwriter is the financial condition of the coal operator.

In reviewing operator financial statements, the underwriter scrutinizes the asset and liability ratios, the debt to net worth ratio and the operator's working capital to determine the collectability of accounts receivable and the quality of investments in a fluctuating market. In addition, the underwriter also assesses off-balance sheet issues such as management and labor relations, quality and quantity of coal reserves, and the sulphur content of the coal. Mining reputation with federal and state regulatory authorities, frequency of violations and compliance with those violations, permit status reports, and coal market contracts may also be reviewed by the underwriter. If the underwriter is not satisfied or has any doubts concerning the operator's ability to perform the future reclamation, the bond will not be written.

Surety companies will not enter into a transaction with anticipation of loss. According to surety representatives, the surety industry, unlike the insurance industry, does not include a loss factor in their calculation of the premium. With surety bonds, according to one representative of the surety industry, premiums are so low compared to the potential exposure that if surety companies developed a formula-rated system similar to the insurance industry, operators would not be able to afford surety bonds. Thus, adjusting rates to lessen exposure is not a surety industry practice and the rates recommended by the Surety Association of America (SAA) to their member companies have not changed over the past decade.

Recent Loss History of Surety Industry

The authoritative source of financial information on the insurance industry is A. M. Best's Aggregates and Averages. Best provides annual statistics on earnings, losses and expenses aggregated by different insurance lines, one of which is surety. Best's data allow comparisons across time and between insurance lines by providing loss and expense ratios; i.e., the ratio of losses and expenses to premium income, expressed as a percent. The sum of loss ratio and underwriting expense ratio is termed the combined ratio and provides a convenient summary referent for comparing pre-investment and pre-tax profitability.[1]

[1]For a more detailed treatment of estimating insurance profitability, see Insurance: Profitability of the Medical Malpractice and General Liability Lines (GAO/GGD-87-67, July, 1987).

Best does not provide data separately for the reclamation bond portion of the surety industry, but representatives of the Surety Association of America provided us with earnings data and expense estimates which allowed us to compare in approximate terms the loss history of reclamation bonds with that of the surety industry as a whole.[2]

Loss/Expense Ratio

Table 4.1 presents the earned premium and losses incurred by reclamation bond underwriters for each year from 1980 through 1986. For this period earned premiums totalled $109 million and incurred losses were $25 million. The pure loss ratio (losses divided by premiums) for this period was 22.8 percent. According to SAA, loss adjustment expense and other underwriting expenses added an estimated 65 to 70 percent to the ratio, resulting in a combined ratio of 87.8 to 92.8 percent.

Table 4.1: Reclamation Bond Loss Experience From 1980 to 1986

Year	Direct premiums earned	Direct losses incurred
1980	$10,902,133	$6,573,300
1981	13,368,217	3,321,808
1982	14,794,226	4,646,443
1983	15,101,654	3,036,743
1984	17,485,132	2,959,339
1985	18,121,669	4,376,690
1986	19,293,744	(372,488)[a]
Total	**$109,066,775**	**$24,914,323**

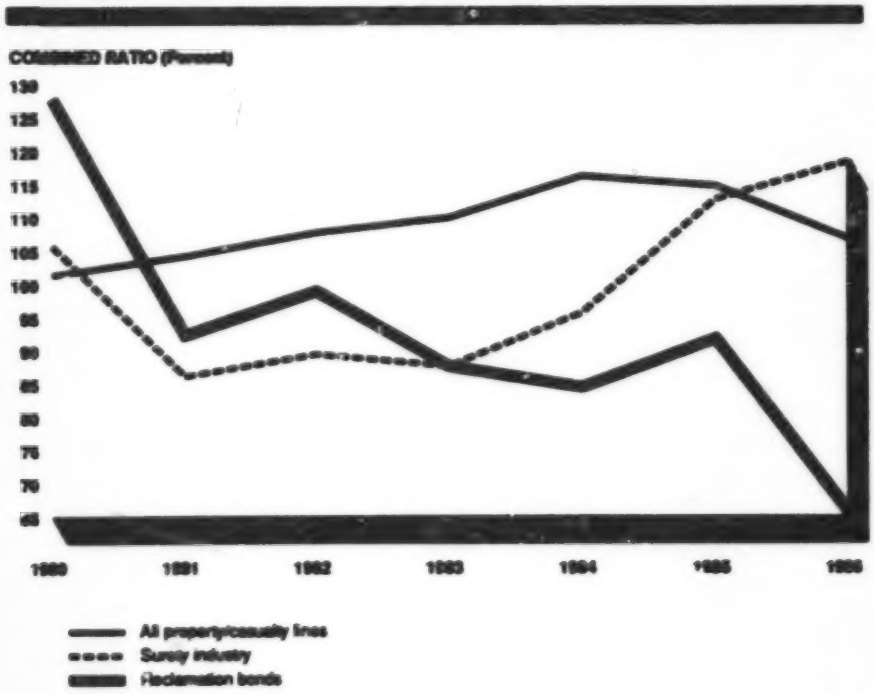
[a]Credit resulted from recovery of losses incurred in previous years.

We compared this loss history with that reported by the entire surety industry and with the loss experience of the overall property/casualty industry. (See Figure 4.1.) During this period the surety industry reported a combined loss ratio of 100.3 percent. In contrast, the reclamation bond industry's 22.8 percent loss ratio when added to SAA's estimated expenses yields a combined loss ratio of 87.8 to 92.8 percent. For the same period the property/casualty industry reported a 108.9 percent combined loss ratio. As figure 4.1 demonstrates, reclamation bonds experienced serious losses in 1980, but their loss ratios since then have generally declined to levels well below those of the surety industry or the overall property/casualty insurance industry. The reporting differences between our data sources make such absolute comparisons only

[2]Two relevant reporting differences exist between SAA and Best data. Best's loss statistics include losses incurred but not reported; SAA's do not. Best's earned premiums are reported net of reinsurance; SAA's are reported without adjustment for reinsurance.

approximate.[3] However, the loss ratios of reclamation bonds have followed a different trend from those of the total surety line in recent years. Surety loss ratios have increased since 1981, and in 1986 the line incurred its largest loss in more than a decade.

Figure 4.1:Combined Loss and Expense Ratios for All Property/Casualty Lines, Surety Industry, and Reclamation Bonds From 1980 to 1986[a]



[a]Reclamation bond expense ratio estimated at 67.5.

Source: Best's Aggregates and Averages for surety and property/casualty; Surety Association of America for reclamation bonds

Underwriting Expenses

The SAA estimate of 65 to 70 percent loss ratio includes a combination of two elements which A.M. Best classifies separately. Approximately 4 percent is attributable to loss adjustment expenses (adjuster's fees, court costs, lawyers' fees, etc.), a category which Best combines with direct losses to form one of its two basic constituents of a pre-dividend combined loss ratio. The remaining 61 to 66 percent is accounted for by

[3]See footnote 2.

underwriting expenses and is approximately equivalent to the second of Best's combined ratio constituents. We compared this estimate with the total underwriting expenses reported by A. M. Best for all surety companies and for all lines of property/casualty insurance from 1980 through 1986. These expenses are presented in Table 4.2. The expense estimate offered by SAA for underwriting reclamation bonds is considerably higher than the ratio reported by the surety industry generally, and surety underwriting expenses in general are 19 percent higher than the total for the property/casualty industry.

Table 4.2: Underwriting Expense Ratios Reported by Surety Industry and All Lines of Property/Casualty Insurance From 1980 to 1986[a]

Year	Surety	All lines
1980	53.2	26.5
1981	52.0	27.4
1982	52.1	27.9
1983	48.1	28.4
1984	46.0	27.9
1985	34.9	25.9
1986	46.0	25.1
Total	**45.6**	**26.8**

[a]Underwriting expense ratio is the ratio of underwriting expenses to premiums written, expressed as a percent

SAA attributes much of the surety underwriting expenses to the extensive investigations they perform of an applicant's creditworthiness. We do not have adequate data to determine whether the relatively high underwriting expenses associated with surety bonds generally, and with reclamation bonds in particular, should be attributed simply to this factor, to underwriting inefficiencies, or simply to the low premium rate charged by surety companies.

Conclusion

From our interviews with state regulatory authorities and industry representatives, our analysis of state-supplied data and of operator responses to our questionnaire, we found that reclamation bonds have become unavailable or too costly for many operators. While it is true that surety rates have not changed substantially over the years, the few surety companies which are underwriting reclamation bonds tend to require substantial collateral, in some cases, 100 percent. The alternatives to surety bonding under SMCRA have much the same effect as high collateral rates: the encumbrance of assets. Small companies can be expected to be most severely affected by this trend. Their cash reserves and their surety credit line are limited; they need bonds released from

their current operations in order to obtain permits to continue mining—and reclamation. The present tight bond market makes them less resilient to downturns in the coal market.

Possible Remedies

As long as the world market for coal remains depressed because of the relatively low price of petroleum, the supply of reclamation bonds can be expected to remain limited. If no action is taken to loosen the tight bond market, more operators, particularly the smaller ones, are likely to abandon surface mining. Among these will be a number of marginal operators who would have defaulted on their reclamation guarantees. On the other hand, some otherwise reliable operators could also leave the industry. Without action, both economic and environmental damage will be sustained by the states in which mining is a significant source of income.

Solutions to the bond availability problem will not be found from a single source. There appear to be individual actions that can be taken by sureties, by state regulatory authorities, and by OSMRE which would help to alleviate the situation.

Surety Industry

The reclamation bond industry forms a minuscule portion of the property/casualty insurance industry. Nevertheless, like the surety industry generally, it has managed to remain profitable during the 1980's while its sister lines of property/casualty insurance were experiencing significant pre-investment losses. Its success must be attributed to its conservative approach to offering bonds, rather than to its pricing strategies. The method surety companies use to price surety bonds does not provide the flexibility necessary to assure that premiums and investment income exceed losses and expenses. Their rates do not take into account any anticipation of loss and surety companies do not use the insurance industry's method of increasing rates to compensate for additional risk. SAA's position is that "loss-sensitive" underwriting of a reclamation bond is "dangerous" and their underwriting practices cannot be compared to how the insurance industry measures risk associated with predictable losses caused by negligent acts. Yet the collateral requirements imposed by many sureties are a form of loss-sensitive underwriting. It would appear that surety bonds might be priced to reflect the probability of default based on the applicant's and the industry's forfeiture history and likely future in a manner similar to that in which the liability insurers price their products to reflect changes in risk.

Short of such loss-sensitive bonding practices, we have seen at least one example of innovative surety company practices where the company became actively involved in assuring its clients' compliance with SMCRA. This Kentucky-based company provided both the financial guarantee required to obtain a permit and close familiarity with state enforcement policy and practices. In contrast to the annual inspection of operations typical of most surety companies, this company performed frequent, even weekly inspections, and forewarned its customers of potential violations. The company had developed a complex pricing scheme for its services, but its rates were generally in excess of standard surety company rates. It did not demand collateral for bonds, but depended on two payments by operators: a variable fee based on tonnage produced, and scheduled payments into an interest-bearing escrow account. We conclude that, while reclamation bonding provides only a small portion of insurance premiums, a market may exist for knowledgeable surety companies to offer a combination of risk underwriting and proactive loss prevention.

State Regulatory Authorities

We have seen some evidence from the Commonwealth of Pennsylvania that state regulatory authorities can help to alleviate the problems of operators seeking surety reclamation bonds. It appears that efforts to attract new surety companies into the state by promoting the soundness of the state program and the consequent low risk of bond forfeiture can be effective in expanding the bond supply. Additional effort to expedite the release of bonds where reclamation has been accomplished without, of course, abandoning the environmental safeguards imposed by SMCRA can reduce an operator's liability and may ease the reluctance of sureties to extend additional bonding. Although it is too soon to evaluate the effect that Kentucky's bond pool program will have on the availability of bonds for smaller operators, other states should monitor the program's success and consider whether similar alternative bonding procedures would meet their needs.

Office of Surface Mining, Reclamation and Enforcement

OSMRE has shown some sensitivity to the bonding problem and has taken some action to focus attention on it. In a draft document circulated in late 1985, it referred to the problem as a "crisis". In late 1986, it sponsored a workshop for coal operators, state officials and members of the surety industry to examine the causes of the problem. The Director of OSMRE has discussed possible alternative approaches to bonding in different public forums. However, we found OSMRE field officials generally unaware of, or unconcerned about, a bonding problem. It would seem

that the assistance and active participation of OSMRE officials would enhance any state-level effort to broaden the reclamation bond supply within the state.

Recommendation

We recommend that the Secretary of the Interior direct OSMRE to explore ways to develop a bond market in which more bond sources are available to responsible coal mine operators and regulators are more confident that reclamation will be timely and successful. This should be done by bringing together all relevant parties including surety representatives, coal mine operators, particularly smaller operators, environmental groups, and state officials. Among the matters that should be discussed are:

- whether or not the liability period for reclamation bonds could be shortened without negatively affecting the environment;
- whether state bond pools could be developed in additional states as alternative bonding mechanisms;
- whether innovations in underwriting reclamation bonds could be introduced without increasing the risk of bond forfeitures.

Questionnaire Response Rates and Implications for Analysis

Our decision to survey mine operators who held reclamation bonds with sureties that became insolvent presented special advantages and some unique disadvantages for estimating the availability of reclamation bonds. These operators were for the most part readily identifiable, since the state offices had recently been required to notify them of the need to replace their bonds and could without much difficulty provide us with their names and addresses. They were relatively homogeneous inasmuch as they were all experienced operators who were forced to seek new sources of performance bonds within the same relatively short period of time. On the other hand, we had reason to expect more than the ordinary difficulty in contacting them and obtaining responses to our questionnaire. If a tight bond market had forced many operators out of business, we anticipated that a disproportionately large number of these mine operators would be no longer at the same address, or, if they could be found, would be unmotivated to respond.

To some extent our expectation about nonresponse was correct. A substantial proportion of our questionnaires were returned by the Postal Service as undeliverable. The overall response rate was also smaller than desired. These problems occurred in each of our four states, but they were most apparent in Kentucky. We undertook an intensive followup effort in each state, but concentrated heavily on Kentucky operators. Through contacts with state headquarters and field offices and with local post offices, town halls and Chambers of Commerce, we attempted to determine whether other addresses could be found for the undeliverable questionnaires, or to verify that these companies had actually gone out of business. We followed similar procedures in attempting to contact operators who had not responded to the survey.

Our efforts resulted in improved response rates, and also allowed us to form better estimates of the number of target companies who had gone out of business. These are presented in Table I.1.

We cannot attribute companies' failure to remain in business to the assumption that they were unable to replace their bonds. However, it seems reasonable to assume that this factor contributed to the decision

Table I.1: Results of Survey Followup

	Kentucky	Ohio	Pennsylvania	West Virginia	Total
Respondent	41	25	29	14	109
Out of Business					
Confirmed[a]	103	3	5	3	114
Probable[b]	7		2		9
Undetermined[c]	41	3		3	47
Nonrespondent[d]	16	4	10	13	43
Total	**208**	**35**	**46**	**33**	**322**
Unadjusted Response Rate[e]	20%	71%	63%	42%	34%
Effective Response Rate[f]	42%	78%	74%	47%	55%

[a]Owner/source(s) confirm that company is out of business.

[b]Source(s) state company probably is out of business.

[c]No source knowledge of status or source inconsistency; unable to contact owner directly.

[d]Owner contacted but failed to respond.

[e]Respondents divided by total.

[f]Excluding out-of-business operators.

to leave the business for a sizable fraction of these operators, and that this is more likely to have been the case among these operators than among the operators whom we were able to include in our survey analysis. For this reason we believe that our analysis provides an underestimate of the size of the bond availability problem and of the effects it has had on coal mine operators.

Our examination of response rates raises one additional concern. The addresses to which we sent questionnaires were provided by state officials as current. Presumably they are the same addresses to which notices of violations are sent. Yet 34 percent of questionnaires mailed to the addresses furnished by Kentucky officials were returned by the Post Office as undeliverable, and our followup efforts revealed that many more addresses were either incorrect or obsolete. This suggests serious deficiencies in Kentucky's ability to contact operators in violation of permit requirements.

Survey of Operators Affected by Surety Insolvencies

U.S. GENERAL ACCOUNTING OFFICE

Program Evaluation and Methodology Division

SURVEY OF OPERATORS AFFECTED BY SURETY INSOLVENCIES

INSTRUCTIONS

Purpose of Survey

During the past few years, coal mine operators have expressed concern about the cost and availability of mining reclamation bonds which are necessary for an operator to mine coal within a permit area. Some operators reported difficulty in finding a bonding company which will write a mining reclamation bond. Several bonding companies which wrote reclamation bonds have become insolvent.

For this reason, the U.S. Congress has asked the United States General Accounting Office (GAO) to examine the availability of surface mining reclamation bonds and the effect this has on the operation of coal mines. Our study will provide the Congress with information needed to determine whether major changes should be made to existing federal environmental legislation. To thoroughly assess this issue, we need information from you—current and past operators of coal mines.

For the purposes of this questionnaire, we would like to define the following terms:

Mining operations—any surface or underground mining operations which result in disturbances of surface areas.

Surety insolvency—the inability of a bonding company to honor its bonds because of financial difficulties.

The questionnaire asks for general information about your mining operations and the experiences your company has had in replacing surety bonds when the bonding companies became bankrupt.

Your answers to this questionnaire will help us make a meaningful assessment of the surety bond market and provide current and accurate information to the Congress.

Confidentiality

Your responses to this questionnaire are confidential. They will not become a part of any state or federal records. We need to find out about your experiences in replacing bonds so that we can report to the Congress about the availability of mining reclamation bonds. Your answers will be combined with the answers received from the other respondents and all results will be reported to the Congress in the aggregate.

How to Complete This Questionnaire

If you currently operate or have operated a coal mine and have been affected by a surety insolvency, please take the time to complete all of the questions which apply. However, if you have never operated a mine and have never had to replace a surety bond, please complete Questions 1 and 2 and return the questionnaire in the enclosed envelope.

The answers to this questionnaire can be reported by checking the answers or filling in blanks to provide general information on your operations and experience in replacing bonds.

Throughout this questionnaire there are small sized numbers printed within parentheses to assist in coding your responses for the computer. Please disregard these numbers.

Please return the completed questionnaire in the enclosed envelope within 10 days of receipt. If you have any questions, please call Gail Shadlick at (202) 275-1228 or Robert White at (202) 275-1860 collect. In the event that the enclosed envelope is misplaced, our address is:

U.S. General Accounting Office
Program Evaluation and Methodology Division
Room 5844
441 G Street, NW
Washington, DC 20548
Attention: Gail Shadlick

Thank you for your help.

(1-5)

1. Does your company operate or has your company ever operated a coal mine since January 1, 1982? (6)
(Check one.)
   1. ☐ Yes
   2. ☐ No

2. Since January 1, 1982, did your company have to replace a bond because of surety insolvency? (7)
(Check one.)
   1. ☐ Yes (GO TO QUESTION 3)
   2. ☐ No (STOP)

THIS SURVEY ASKS ONLY ABOUT COAL MINE OPERATIONS THAT HAVE BEEN AFFECTED BY SURETY INSOLVENCIES SINCE 1982. IF YOU HAVE NOT BEEN AFFECTED BY SURETY INSOLVENCIES OR HAVE NOT OPERATED A COAL MINE SINCE 1982, DO NOT CONTINUE. THANK YOU FOR YOUR HELP. PLEASE RETURN THIS QUESTIONNAIRE SO THAT WE CAN MAKE SURE WE ARE COUNTING YOUR RESPONSE IN OUR OVERALL ESTIMATE.

---

3. How long has your company been in the coal mining business? (8-9)
   _____ *(Years)*

4. What type of coal operation(s) do you have?
(Check all that apply.)
   1. ☐ Surface mine (10)
   2. ☐ Underground mine (11)
   3. ☐ Tipple (12)
   4. ☐ Coal processing facility *(Wash plant, etc.)* (13)
   5. ☐ Other *(Specify)*_____ (14)
      _____ (15)

5. Approximately how many tons of coal did your company put to use annually from all mines in the calendar year before your bond was affected by a surety insolvency? *(If you were affected by more than one surety insolvency, answer for the calendar year before the first surety failure.)*

_____ *(Tons)*

Circle the year for which you are reporting.

1986 1985 1984 1983 1982

6. Of the tons of coal you listed in question 5, approximately how many tons were produced by the operations which were affected by surety insolvencies?

_____ *(Tons)*

7. In the year you circled for question 5, about what percent of your coal production was in the following markets? *(Enter percent for each type.)*

1. _____ % Electrical utilities
2. _____ % Industry
3. _____ % Private sales
4. _____ % Export outside the United States
5. _____ % Other *(Specify)* _____

8. In the year you circled for question 5, about what percent of your coal production was covered by the following agreements?
(Enter percent for each type.)

1. _____ % Long-term *(1 months or more)*
2. _____ % Short-term *(Less than 3 months)*
3. _____ % Spot market *(Month by month)*
4. _____ % Other *(Specify)* _____

9. Do you own or lease the coal that you mine? *(Check all that apply.)*

1. ☐ Own
2. ☐ Lease
3. ☐ Neither own nor lease *(e.g., contract mining)*
4. ☐ Other *(Specify)* _____

10. What is your corporate structure? *(Check one.)*

1. ☐ Corporation, partnership, or sole proprietorship
2. ☐ Subsidiary, or part of larger U.S. company
3. ☐ Subsidiary or part of larger foreign company
4. ☐ Other *(Specify)* _____

11. Which—if any—of the following methods did you use to replace the bond(s) affected by the surety insolvency? *(Check all that apply.)*

1. ☐ Certificate of deposit
2. ☐ Letter of credit
3. ☐ Cash, check, money order
4. ☐ Surety bonds
5. ☐ Other *(Specify)* _____
6. ☐ None—did not replace bond(s) **SKIP TO QUESTION 13**

CONTINUE

12. The following chart asks for information on your company's experience in replacing surety bonds for those bonds which were affected by surety insolvencies since 1984. In the first four columns, we have provided information which we have obtained from state officials. Please verify and correct this information, if necessary. If we have omitted any bonds affected by an insolvent surety, fill in the information for those bonds at the end of this chart. Please indicate how you replaced the affected bond(s) by filling in the appropriate columns.

First, in column 5 list the amount, if any, which has been released from the affected bond (that is, the bond listed in column 4). If none, write none.

PERMITS AND BONDS AFFECTED BY SURETY INSOLVENCIES				BOND AMOUNT RELEASED	TOTAL BOND AMOUNT REPLACED	REPLACEMENT
Permit Number (1)	Bond Number (2)	Insolvent Surety Company Name (3)	Bond Amount in Dollars (4)	Amount in Dollars (5)	Amount in Dollars (6)	Certificate of Deposit Amount in Dollars (7)
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$
			$	$	$	$

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Next, in column 6 list the total amount of the affected bond which you have replaced by any method. Do not include in this total any portion of the bond which was released.

In columns 7 and 8 list the value of the Certificates of Deposit and Letters of Credit if you replaced bonds by these methods. If you were required to post collateral to obtain a Letter of Credit, list the value of the collateral in column 9. In columns 10 and 11 list the value of any other financial mechanisms you used.

Finally, if you replaced the affected bonds with other surety bonds, list the amount replaced, the date, the surety company name, and the value of the collateral, if any, required by the surety in columns 12 through 15.

METHODS OTHER THAN BONDS				REPLACEMENT BONDS			
Letter of Credit		Other Methods (i.e., cash, checks, treasury note, etc.)		Bond Amount Replaced (in Dollars) (12)	Date Replaced (Mth/Yr) (13)	Surety Company Name (14)	Value of Collateral Required by Surety (15)
Amount in Dollars (8)	Collateral Required (9)	Type (10)	Amount (11)				
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			
$	$		$	$			

13. In your opinion, how important were each of the following reasons in determining your ability to replace the bonds? *(Check one for each item.)*

Reasons	1 Of Little or No Importance	2 Of Some Importance	3 Of Moderate Importance	4 Of Great Importance	5 Of Very Great Importance	6 Did Not Consider
(1) Company financial condition						
(2) Size of company						
(3) Size of expanded operation						
(4) Length of time in business						
(5) Availability of coal contracts						
(6) Size of bond needed						
(7) Partial bond release						
(8) Company owns land being mined						
(9) Company is owned by a foreign corporation						
(10) Company is a subsidiary of a larger corporation						
(11) Company is an independent corporation, partnership, or sole proprietorship						
(12) Other (specify reason and check significance):						

14. When your surety company became insolvent, what were the consequences for your company? *(Check all that apply.)*

1. ☐ Suspended operation(s) for _____ weeks *(Fill in number.)*
2. ☐ Laid off _____ employee(s) *(Fill in number.)*
3. ☐ Incurred $ _____ in legal expenses *(Fill in approximate amount.)*
4. ☐ Filed for bankruptcy
5. ☐ Other *(Specify.)* _____

15. What rate did you pay your former surety for the bonds affected by insolvency?
(If the rates differ, provide the rate you paid for most of your bonds.)

Enter one rate and check one payment period.

Rate	Payment Period
_____ % *(Percent of face value)*	☐ for term of bond ☐ per year for term of bond
_____ $/$1000 /year *(Dollars per thousand per year)*	☐ per year for _____ years *(fill in)*
Other *(Specify)*: _____	

16. Would your company be willing to pay a surety a higher rate than the rate you specified in question 15 in order to replace a bond? *(Check one.)*

1. ☐ Yes
2. ☐ Probably yes
3. ☐ Uncertain
4. ☐ Probably no
5. ☐ No **(GO TO QUESTION 18)**

17 What rate would you be willing to pay a surety to replace a bond(s)? *(Fill in one of the following rate categories.)*

Enter one rate and check one payment period.

Rate	Payment Period
_____ % *(Percent of face value)*	☐ for term of bond ☐ per year for term of bond
_____ $1000/year *(Dollars per thousand per year)*	☐ per year for _____ years *(fill in)*
Other *(Specify)* _____	

18 Did your former surety – the one which became insolvent – require you to post any collateral to obtain any of the bonds listed in question 12?

1 ☐ Yes (CONTINUE TO QUESTION 19)

2 ☐ No (GO TO QUESTION 21)

19 Of the bonds listed in question 12, for how many bonds did your former surety company require you to post collateral? (Fill in number.)

_____ *(bonds)*

20 Of the bonds for which your former surety company required collateral, on the average, what percent of the face value of the bond(s) was required as collateral? *(Fill in percent.)*

_____ % *(Percent of face value of bond)*

21 To what extent, if any, were the following factors a problem in replacing bonds? *(Check one column for each factor.)*

Factors	1 Little or No Problem	2 Some Problem	3 Moderate Problem	4 Great Problem	5 Very Great Problem	6 Did Not Consider
(1) High rate charged by bonding company						
(2) Amount of collateral required by bonding company						
(3) Surety unwilling to write bonds						
(4) Surety willing to write bonds only if other services purchased						
(5) Other (Specify factor and check significance) _____ _____ _____						

22. If you have additional comments concerning your experiences with bond availability and affordability, please add them below.

Thank you for your cooperation.

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Use of Non-Surety Reclamation Bonds

Table III.1: Face Value and Percent of Non-Surety Reclamation Bonds Written in Kentucky, Ohio, and West Virginia From 1977 to 1980[a]

	1977		1978		1979		1980		1981	
	Value	%	Value	%	Value	%	Value	%	Value	%
Kentucky										
Certificate of Deposit	$63	4	$799	26	$4,615	35	$4,873	34	$5,507	30
Letter of Credit	877	51	1,212	39	8,386	63	9,262	64	12,387	68
Cash/check	775	45	1,114	36	315	2	303	2	198	1
Total	**1,716**	**100**	**3,124**	**100**	**13,317**	**100**	**14,438**	**100**	**18,093**	**100**
Ohio										
Certificate of Deposit	21	97	0	0	24	91	56	100	261	30
Letter of Credit	1	3	2	100	2	9	0	0	87	10
Cash/check	0	0	0	0	0	0	0	0	508	59
Total	**21**	**100**	**2**	**100**	**27**	**100**	**56**	**100**	**856**	**100**
West Virginia										
Certificate of Deposit	1,254	84	966	99	2,651	87	3,230	95	5,947	97
Letter of Credit	0	0	0	0	0	0	0	0	0	0
Cash/check	12	1	2	0	57	2	21	1	126	2
Other	232	15	4	0	344	11	140	4	66	1
Total	**1,498**	**100**	**972**	**100**	**3,052**	**100**	**3,391**	**100**	**6,140**	**100**
Total										
Certificate of Deposit	1,338	41	1,764	43	7,291	44	8,159	46	11,715	47
Letter of Credit	878	27	1,214	30	8,389	51	9,262	52	12,474	50
Cash/check	787	24	1,116	27	372	2	323	2	832	3
Other	232	7	4	0	344	2	140	1	66	0
Total	**$3,235**	**100**	**$4,096**	**100**	**$16,396**	**100**	**$17,885**	**100**	**$25,087**	**100**

1992		1993		1994		1995		1996		Total	
Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
$4,110	19	$1,494	25	$5,956	19	$3,850	24	$1,876	57	$33,145	26
17,033	80	4,434	73	25,261	80	12,242	75	1,160	35	92,253	71
259	1	121	2	249	1	282	2	262	8	3,878	3
21,402	**100**	**6,049**	**100**	**31,467**	**100**	**16,375**	**100**	**3,298**	**100**	**129,276**	**100**
1,537	73	2,487	69	3,716	51	1,564	47	1,376	37	11,042	53
33	2	29	1	71	1	21	1	144	4	392	2
536	26	1,099	30	3,468	48	1,718	52	2,155	59	9,487	45
2,108	**100**	**3,815**	**100**	**7,256**	**100**	**3,304**	**100**	**3,676**	**100**	**20,921**	**100**
5,985	96	7,077	92	8,184	95	6,024	84	3,150	25	44,469	77
0	0	0	0	128	1	934	13	3,561	28	4,623	8
66	1	398	5	167	2	68	1	5,337	42	6,255	11
189	3	192	3	130	2	188	3	660	5	2,145	4
6,241	**100**	**7,668**	**100**	**8,609**	**100**	**7,215**	**100**	**12,707**	**100**	**57,492**	**100**
11,632	39	11,059	64	17,857	38	11,439	43	6,402	33	88,656	43
17,066	57	4,463	26	25,460	54	13,197	49	4,865	25	97,268	47
864	3	1,618	9	3,885	8	2,069	8	7,754	39	19,620	9
189	1	192	1	130	0	188	1	660	3	2,145	1
$29,751	**100**	**$17,332**	**100**	**$47,332**	**100**	**$26,893**	**100**	**$19,681**	**100**	**$207,689**	**100**

*Value expressed in dollars rounded to the nearest thousand

*U.S. G.P.O. 1988- 201-749:80045

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